



The California Institute for Quantitative Biosciences (QB3)

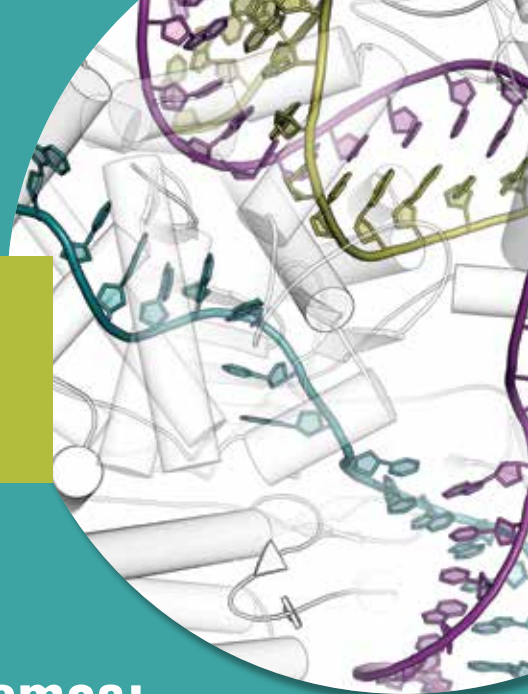
is a three-campus partnership established in 2000 with the University of California campuses at Berkeley, San Francisco, and Santa Cruz and industry and venture partners. At Berkeley, QB3 stimulates discovery at the intersection of the physical and biological sciences by promoting multidisciplinary research in world-class facilities, creating innovative educational programs, and fostering industry partnerships.



The Innovative Genomics Institute (IGI) is a non-profit, academic research organization composed of diverse labs with a powerful combined expertise, driven by the real possibility to cure human disease, end hunger, and protect the environment. The IGI's scientists conduct world-class research using CRISPR genome editing technology, functional genomics, and other cutting-edge approaches. In addition to supporting ground-breaking science with grants and core services, the IGI is committed to advancing public understanding of genome engineering.

Molecular art by Ross Wilson

AUGUST
18
2017



5th ANNUAL
**Re-writing Genomes:
A New Era in Genome Engineering**

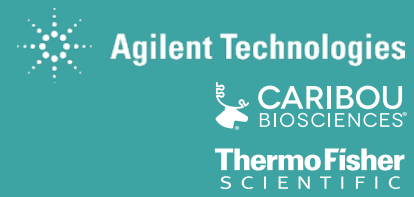


A one-day symposium hosted by the California Institute for Quantitative Biosciences at Berkeley and the Innovative Genomics Institute



105 Stanley Hall
University of California, Berkeley

SPONSORS



5th ANNUAL

Re-writing Genomes: A New Era in Genome Engineering

ORGANIZED BY

Dirk Hockemeyer, Assistant Professor, UC Berkeley

Jennifer Doudna, Professor & Executive Director, IGI, UC Berkeley, HHMI

8:30-9:00 Welcome/Introductions

SESSION 1: MOLECULAR MECHANISMS

- 9:00-9:30** **Jennifer Doudna**, Ph.D., Session Chair, Professor & Executive Director, Innovative Genomics Institute, UC Berkeley, HHMI, *CRISPR Biology and Technology: The Future of Genome Editing*
- 9:30-9:50** **Blake Wiedenheft**, Ph.D., Assistant Professor, Montana State University, *Evolutionary Outcomes of CRISPR-anti-CRISPR Conflict*
- 9:50-10:10** **Joshua Modell**, Ph.D., Postdoctoral Fellow, The Rockefeller University, *CRISPR Systems Exploit Viral DNA Injection to Establish and Maintain Adaptive Immunity*
- 10:10-10:40** Break (refreshments & posters in the atria)

SESSION 2: GENOMIC APPROACHES & MODEL ORGANISMS

- 10:40-11:10** **Jacob Corn**, Ph.D., Session Chair, Scientific Director, Biomedicine, Innovative Genomics Institute, UC Berkeley, *Mechanisms of Cas9 Genome Editing in Human Cells*
- 11:10-11:30** **Tom Norman**, Ph.D., Damon Runyon Cancer Research Foundation Fellow, UCSF, *Interpreting Genetic Screens Using Perturb-seq*
- 11:30-11:50** **Julia Jung**, Graduate Student, MIT, *Genome-scale Activation Screen Identifies a LncRNA Locus Regulating a Gene Neighborhood*
- 11:50-12:10** **Anne Brunet**, Ph.D., Michele and Timothy Barakett Endowed Professor, Stanford University, *Understanding and Modeling Aging*
- 12:10-1:45** Lunch Break (lunch provided outside on the lawn for registered guests)

SESSION 3: HUMAN DISEASE

- 1:45-2:15** **Eric Olson**, Ph.D., Session Chair, Professor & Chair, Molecular Biology, University of Texas Southwestern Medical Center, *Correction of Muscle Disease by Genome Editing*
- 2:15-2:35** **Dirk Hockemeyer**, Ph.D., Assistant Professor, UC Berkeley, *Elucidating Cancer Cell Immortality Using Genome Editing*
- 2:35-2:55** **Mark Walters**, M.D., Director, Blood & Marrow Transplant Program, UCSF Benioff Children's Hospital Oakland, *The Pursuit of a Cure for Sickle Cell Disease*
- 2:55-3:15** **Eric Pierce**, M.D., Ph.D., Director of the Ocular Genomics Institute at Massachusetts Eye and Ear, and Solman and Libe Friedman Professor of Ophthalmology at Harvard Medical School, *Allele-Specific Genome Editing for Dominant Inherited Retinal Degenerations*
- 3:15-3:45** Break (refreshments & posters in the atria)

SESSION 4: GENE DRIVES & GLOBAL DISEASE

- 3:45-4:15** **Leslie Vosshall**, Ph.D., Session Chair, Professor, The Rockefeller University, HHMI, *Genetic Modification of Disease-Vectoring Mosquitoes*
- 4:15-4:35** **David Fidock**, Ph.D., Professor, Columbia University Medical Center, *Leveraging Genome Editing to Elucidate Mechanisms of Antimalarial Drug Resistance*
- 4:35-4:55** **Andrea Crisanti**, Ph.D., Professor, Imperial College London, *Assessing and Mitigating Resistance to Gene Drive*
- 4:55-5:15** Closing Remarks & Poster Prize